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(54) PRODUCTION OF OPTICALLY ACTIVE ALPHA-HYDROXY ACID OR **ALPHA-HYDROXYAMIDE**

(57) Abstract:

PURPOSE: To simply obtain the subject compound at a high concentration by an action of a microorganism by continuously monitoring the cyanogen ion concentration in a reactional system with a cyanogen ion detector and interlocking the cyanogen ion detector and a regulator with a cyanohydrin feeder.

CONSTITUTION: A cyanohydrin of formula I {9146/28}R₁ is H or methyl; R₂ is an alkyl (except methyl when R₁ is methyl)] is reacted with a microorganism having the nitrilase or nitrile hydratase activity or a treated substance thereof and converted into an optically active α -hydroxy acid or α -hydroxyamide of formula II (X is carboxyl or amide). The cyanogen ion concentration in the system is continuously monitored with a cyanogen ion detector and a cyanohydrin feeder is interlocked with the cyanogen ion detector and regulator to carry out the reaction while automatically controlling the cyanohydrin concentration in the system.

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$$R_1$$

$$|$$

$$R_1 - C - CN$$

$$|$$

$$OH$$

$$R_{1}$$

$$\mid$$

$$R_{2}-C-X$$

$$\mid$$

$$OH$$